

SEWAGE SLUDGE QUESTIONNAIRE

1. GENERAL INSTRUCTIONS

1.1 Introduction

The U.S. Nuclear Regulatory Commission (NRC) and the U.S. Environmental Protection Agency (EPA) request your participation in a joint national survey of the concentrations of radioactive material in sewage sludge (biosolids), ash, and related byproducts.

NRC regulations in 10 CFR 20.2003 currently permit licensee disposal of certain specific quantities of soluble or readily dispersible biological radioactive material into a sanitary sewer system. The EPA regulation that addresses the use or disposal of sewage sludge (40 CFR Part 503) currently does not address radionuclides.

This survey will help determine the adequacy of the present NRC and EPA regulations addressing the discharge of radioactive material to the sanitary sewer system. It will also respond to a recommendation from the General Accounting Office (GAO) to determine the extent to which radioactive contamination in sewage sludge, ash, and related byproducts is occurring (GAO report, "Actions Needed to Control Radioactive Contamination at Sewage Treatment Plants," May 1994).

1.2 When and Where to File

Please return the completed questionnaire within 30 days of date of receipt to the address below:

U.S. Nuclear Regulatory Commission
Attn: Mary Thomas
Mail Stop T-9C24
Washington, DC 20555

1.3 Reporting Period

Please report information for the last 12 months or the last calendar year.

1.4 Further Information

If you require assistance in completing this questionnaire, call Robert Bastian, EPA, at 202-260-7378, (email: bastian.robert@epa.gov) or Mary Thomas, NRC, at 1-800-368-5642-extension 6230 (email: mlt1@nrc.gov).

2. GLOSSARY OF TERMS

End-products are the materials that leave the treatment facility or are disposed of onsite after all processing is completed (e.g., ash from incineration, digested liquid or dewatered cake, dried pellets, compost).

Incineration is the combustion of matter in sewage sludge by high temperatures in an enclosed device.

Land application is the application of sewage sludge to land to either condition the soil or fertilize crops or other vegetation.

Monofills are landfills where only sewage sludge is disposed. Monofills include trenches and area fills.

Municipal solid waste landfill is a landfill that receives household waste, and that is not a land application unit, surface impoundment, injection well, or waste pile. Such a landfill may be publicly or privately owned.

Sewage sludge is solid, semi-solid, or liquid residue generated during the treatment of domestic sewage in a treatment works. Sewage sludge includes, but is not limited to: domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment processes; and material derived from sewage sludge. Sewage sludge does not include ash generated during the incineration of sewage sludge or grit and screenings generated during preliminary treatment of domestic sewage in a treatment works.

Surface disposal is the placement of sewage sludge on an area of land for final disposal. It includes monofills, surface impoundments, lagoons, waste piles, and dedicated disposal sites. It does not include treatment and storage of sewage sludge, although placement on land for longer than 2 years is considered surface disposal unless the site owner/operator retains written records demonstrating that the operation constitutes a treatment or temporary storage site.

Treatment works is either a Federally-owned, publicly-owned, or privately-owned device or system used to treat (including recycle and reclaim) either domestic sewage or a combination of domestic sewage and industrial waste of a liquid nature.

Use or disposal includes: land application of bulk sewage sludge, land application of sewage sludge sold or given away in a bag or other container, surface disposal, disposal in a municipal solid waste landfill unit, incineration, or any other use or disposal practice (e.g., vitrification, use in asphalt or brick production, etc.).

SECTION I. TREATMENT WORKS IDENTIFICATION INFORMATION

Mailing Label

Name of the treatment works and physical location (which may differ from the mailing address):

Mailing address of the treatment works (if different):

Name, title, and telephone number of the person who should be contacted regarding information on this questionnaire:

Name, title, address, and telephone number of the person who should be sent the sample collection package:

SECTION II. GENERAL TREATMENT WORKS INFORMATION

1. Indicate below the level(s) of wastewater treatment achieved by this treatment works. (Mark X for all that apply.)

- a. ☒ Primary treatment
- b. ☒ Secondary treatment
- c. ☒ Advanced treatment

2. Provide the annual average daily total flow rate for the last 12 months or the last calendar year (the total volume of wastewater treated by the treatment works in one year divided by 365). Use Gallons per Day (GPD) if your total daily flow rate is less than 10,000 GPD, *or* use Million Gallons per Day (MGD), but not both.

_____ GPD or MGD (Circle one) over the
last 12 months or last calendar year (circle one)

3. List the zip codes served by the collection system for this treatment works. This information is needed so NRC can identify licensees that can potentially discharge to your collection system. A list of these licensees will be sent to you in return for providing this information.

4. Identify the *sewage sludge* treatment process(es) used at your treatment works. (Mark X for all that apply.)

- a. **Q** Treatment works did not process sewage sludge in the last 12 months or the last calendar year.
Explain: _____
- b. **Q** Thickening
- c. **Q** Mechanical dewatering by _____
(Please fill in process(es) used.)
- d. **Q** Heat treatment/wet air oxidation
- e. **Q** Aerobic digestion
- f. **Q** Anaerobic digestion
- g. **Q** Composting
- h. **Q** Lime stabilization (Class B)
- i. **Q** Alkaline Stabilization (Class A)
- j. **Q** Air drying beds
- k. **Q** Heat drying/Pelletizing
- l. **Q** Sewage sludge treatment/storage lagoon(s)
- m. **Q** Sewage sludge storage bins or piles
- n. **Q** Incineration

- o. **Q** Other sewage sludge treatment processes (Please specify.)

5. Check the boxes below to indicate the sewage sludge use or disposal practice employed at your facility or by others using/disposing of your sewage sludge or ash. Also describe the product as one of the following: slurry, dewatered cake, compost, pellets, ash, effluent, grit, or other. Note if the product is stored onsite before ultimately being disposed offsite; and if the product is stored onsite, the time stored onsite.

- a. **Q** Land application. Product description:

- b. **Q** Surface disposal (permanent piles, lagoons, sludge or ash monofills). Product description:

- c. **Q** Disposal in municipal solid waste landfill. Product description:

- d. **Q** Transfer of your sewage sludge or ash to another facility for use or disposal. Product description:

Identify the facility (type, location):

- e. **Q** Other use or disposal practice. Product description:

Describe practice:

6. What are the primary sources of drinking water for your community? Check more than one, if applicable.

a. **Q** Municipal water supply from surface water source(s)

b. **Q** Municipal water supply from groundwater well(s)

c. **Q** Private wells

d. **Q** Private water supply from surface water source(s)

7. Does your wastewater collection system receive discharges of drinking water treatment residuals?

Q Yes

Q No

8. Does your wastewater collection system include combined sanitary and storm water sewers?

Q Yes

Q No

9. Do you receive sludge from other wastewater treatment facilities for processing at your facility?

Q Yes

Q No

10. Do you receive septage for processing at your facility?

Q Yes

Q No

11. What percentage of the annual average daily total flow rate (response to question 3) is industrial flow?

_____ Percent

12. Have you ever tested for radioactive materials in your sewage sludge?

Q Yes

Q No

13. Do you have more than one final sewage sludge production facility location?

Q Yes

Q No